

REMARKS

The courtesies extended by the Examiner during a brief telephone interview on December 23, 2003 are noted and appreciated. It is understood as a result of this interview that the December 2, 2003 Office Action is not a final action, and that the "Office Action Summary" page of the Office Action is incorrect in this respect.

Careful review and examination of the subject application are noted and appreciated. Particularly appreciated is the indication of allowable subject matter in claims currently pending in the application.

Claims 1-7, 9-28, 42-49 and 57-61 remain for examination in the present application.

Independent Claim 1 and Dependent Claims 2-7 and 9-15

Independent claim 1 and associated dependent claims have been rejected either as being anticipated by King 6,015,054, or as being obvious over King '054 combined with other references. Reconsideration is respectfully requested.

Amended independent claim 1 is directed to a child-resistant package that includes a container having at least one external thread and angularly spaced pockets on the external thread. A closure has at least one internal thread and angularly spaced lugs on the internal thread. One of the threads has a circumferentially facing stop extending axially from an end of the thread. The other thread has an end with an abutment face for abutment with the stop to prevent over-tightening of the closure and over-compression of the spring element on the closure. The at least one internal thread on the closure and the at least one external thread on the container finish both are continuous threads, and the

lugs on the internal thread are equal in number to the pockets in the external thread. Thus, in one disclosed embodiment, there are single threads on the finish and closure, each having four angularly spaced pockets or lugs. In another disclosed embodiment, there are dual threads on the finish and closure, each having two angularly spaced pockets or lugs. In another embodiment, the finish and closure each could have four threads, each with a single pocket or lug, so that there are four angularly spaced pockets and four angularly spaced lugs.

Amended claim 1 clearly is not anticipated by King 6,015,054. First, it is noted that King '054 is clearly and unequivocally limited to provision of discontinuous internal thread segments on the closure skirt. See for example, column 3, lines 50-53 discussing the discontinuous thread segments, as contrasted with the discussion of the "continuous" thread segments on the container finish. The Examiner refers to "pockets" on the undersurface of the external thread. The purpose of these "pockets" is to provide portions 28,30 of differing pitch, with the closure internal thread segments being captured against the portions 28 of little or no pitch so that container internal pressure does not tend to urge the closure to unthread from the finish (column 11, lines 26-30). However, even if the external threads are considered to have "pockets" in King '054, there are clearly two such "pockets" for each internal thread segment 18, which is to say that the lugs and the pockets are not equal in number as recited in amended claim 1. Thus, amended claim 1 clearly is not anticipated by King '054.

Nor is amended claim 1 obvious over King '054, either alone or combined with other references of record. For example, DT 2625875 (DT) discloses continuous internal and external threads on the closure and container, but thus is directly contrary to

the express teaching of King '054 that the internal thread segment on the closure must be discontinuous. It clearly would not have been obvious to provide a continuous internal thread on the closure skirt in King '054 because the reference then would not operate as disclosed. Furthermore, the gap 118 in the external thread segment in DT FIG. 1 extends entirely through the thread, creating spaced thread segments, so that the continuous internal thread on the closure does not have a continuous upper external thread surface to ride along during application of the closure. Thus, amended claim 1 clearly is not obvious over a combination of King '054 with the DT reference. King 4,084,717, Ladina 5,462,186 and Davis 4,567,992 are cited for features not germane to amended claim 1.

Dependent claims 2-7 and 9-15 are allowable both by reason of dependency from claim 1, which is itself allowable for reasons set forth above, and because of the additional novel limitations set forth therein. For example, amended dependent claim 2 recites that the axially extending stop extends from a lower end of the external thread on the container finish, and that the continuous internal and external threads are single threads that extend for at least 450°. As noted in the paragraph bridging pages 8 and 9 of the application text, this elongated thread dimension, which is greater than the dimension recommended by the Closure Manufacturers Association and the Society of the Plastics Industry, has the important advantage that the container may then be used with a non-child-resistant closure without jamming. That is, the thread on the non-child-resistant closure, which would typically be a 360° thread as recommended by the Closure Manufacturers Association and the Society of the Plastics Industry, will stop well short of and not jam on the thread stop on the container finish. The Examiner has rejected claim 2 as being obvious over King '054 combined with the DT reference. However, the DT

reference does not show a package in which either the internal thread on the closure or the external thread on the finish extends for at least 450°. Thus, the combination of King '054 and the DT reference neither teaches nor renders obvious the subject matter of amended dependent claim 2.

Dependent claim 3 is rejected over the three-reference combination of King '054, King 4,084,717 and Ladina 5,462,186. Dependent claim 3 recites that the axially extending stop extends from the upper end of the internal thread on the closure, and that the internal and external threads are dual threads with each extending for at least 180°. King '717 is cited for alleged disclosure of a stop at the upper end of the internal thread on the closure, with the Examiner referencing in particular to elements 22 and 22a. However, the elements 22, 22a on the closure are “separate from the closure thread” (column 1, lines 44-45, emphasis added), and do not extend axially from an end of the closure thread. Just as important, the elements 22, 22a do not constitute an axially extending “stop,” but rather are “ratchet teeth” that cooperate with “ratchet portions” 40, 42 at the upper ends of the container external threads “to prevent removal of the closure from the container while the engagement is maintained” (column 1, lines 57-59). That is, the elements 22, 22a (and the diametrically opposed elements 26, 26a) are locking ratchets and not axially extending thread stops, as clearly shown in FIGS. 7 and 8 of the King reference. Thus, it is submitted that King '717 teaches nothing combinable with King '054 relative to claim 3 of the present application. Ladina is cited merely for disclosure of dual threads in a container package, specifically a carbonated beverage container package and not even a child-resistant package. In any event, Ladina adds nothing to the disclosures of King '054 and King '717, which are deficient relative to claim 3 for reasons discussed in detail above.

Claims 4-5 are rejected as being anticipated by King '054, and are allowable for reasons set forth above in connection with amended independent claim 1. Moreover, King '054 does not disclose the geometry or orientation of the ends of the thread segments 18 or the thread path 26. Likewise, amended dependent claim 6 is not anticipated by King '054 for reasons discussed above in connection with claim 1.

Dependent claim 7 recites that the stop extends axially from the upper end of the at least one closure internal thread, and has been rejected over the combination and King '054 and King '717. As noted above in detail in connection with claim 3, King '717 does not in any way disclose or suggest a thread stop extending axially from the upper end of the closure internal thread, but rather discloses ratchet teeth that are spaced from the upper end of the closure internal thread and perform a locking function in connection with ratchet lugs spaced from the upper end of the container external thread. This ratchet tooth construction and locking function are not in any way analogous to the thread stop construction and function of claim 7. Thus, claim 7 is clearly allowable over the combination of King '054 and King '717.

Amended claim 13 recites a liner disk separate from the spring element and urged by the spring element into engagement with the container finish. There is no such liner disk disclosed in King '054, the DT reference or Davis 4,567,992 cited relative to claim 13.

Claim 14 has been found allowable, and claim 15 is not mentioned in the Detailed Action.

Independent Claim 16 and Dependent Claims 17-28

Amended independent claim 16 is directed to a child-resistant closure and container package that includes a container having a finish with at least one continuous external thread and angularly spaced pockets on an undersurface of the external thread that do not extend axially through the thread so that the upper surface of the external thread is continuous throughout the external thread. A closure has a base wall, a peripheral skirt with at least one continuous internal thread and angularly spaced lugs on the internal thread for receipt in the pockets. The closure also has a spring element for engagement with the container finish to bias the closure away from the finish and urge the lugs into the pockets. The lugs on the at least one continuous internal thread are equal in number to the pockets on the at least one external thread.

Claim 16 has been rejected over the combination of King '054 and the DT reference. As noted in detail above in connection with claim 1, King '054 teaches away from provision of a continuous internal thread on the closure. Furthermore, the thread segments on the closure are not equal in number to the pockets on the finish external thread in King '054. These deficiencies in King '054 are in no way taught or suggested in the DT reference. Indeed, in this respect, it is respectfully submitted that the disclosures of these references are not combinable with each other.

Dependent claims 17-28 are allowable both by reason of dependency from claim 16, which is itself allowable for reasons set forth above, and because of the additional novel limitations set forth therein. For example, dependent claims 18-20 are allowable for reasons discussed in detail above in connection with claims 1, 6 and 7. Claims 21-22 are allowable for reasons discussed above in connection with claims 2 and

3. Claims 26 and 28 are allowable for reasons discussed above in connection with claims 13 and 14.

Independent Claim 42 and Dependent Claims 43-49

Independent claim 42 is rejected as allegedly being anticipated by King '054. However, as discussed in detail above in connection with claim 1, King '054 does not disclose or suggest provision of a closure that includes an integrally molded one-piece plastic body having a continuous internal thread and a spring element for engagement with a container finish. In King '054, the internal thread is discontinuous, and the "spring element" 46 is formed separately from the closure shell, which is to say that the closure shell and "spring element" 46 in King are not an integrally molded one-piece plastic body.

Dependent claims 43-49 are allowable by reason of dependency, and because of the additional novel limitations set forth therein, some of which have been discussed in detail above.

Independent Claim 57 and Dependent Claims 58-59

New independent claim 57 is directed to a child-resistant closure and container package that includes a container having a finish with at least one continuous external thread and pockets on an undersurface of said external thread that do not extend axially through said thread, such that an upper surface of the external thread is continuous throughout the external thread. A closure of one-piece molded plastic construction has a base wall, a peripheral skirt with at least one continuous internal thread, lugs on the internal thread for receipt in the pockets of the container finish external thread, and a spring element for engagement with the finish to bias the closure away from the finish and

urge the lugs into the pockets. A liner disk is loosely captured by the at least one internal thread within the closure adjacent to the base wall, and is adapted to be urged by the spring element into engagement with the finish. The disk includes a base with metal and plastic layers adapted for induction sealing securement to the finish such that, upon removal of the closure, the metal and plastic layers remain secured to the finish and the liner base is removed with the closure. In addition to the recitation of the continuous threads on the container and closure, and the recitation of the closure being of one-piece molded plastic construction including the spring element, the cited art fails to disclose or suggest a liner disk loosely captured by the internal thread on the closure and adapted to be urged by the spring element into engagement with the finish. The cited art also fails to disclose a liner disk that includes a base with metal and plastic layers adapted for induction sealing securement to the finish such that, upon removal of the closure, the metal and plastic layers remain secured to the finish and the liner base is removed with the closure.

New dependent claims 58 and 59 are directed to details of the spring element, and are allowable both by reason of dependency from claim 57, and because of the additional novel limitations set forth therein.

Independent Claims 60 and 61

New independent claims 60 and 61 are directed to a container having a finish with at least one external thread and pockets on an undersurface of the thread that do not extend through the thread, such that the upper surface of the thread is continuous throughout the external thread. Claims 60 recites that the at least one external thread is a single thread that extends for at least 450°. Claim 61 recites that the at least one external thread is a dual thread, with each thread extending for at least 180°.

The Examiner appears to suggest at the top of page 3 of the Office Action that the external thread in the DT reference extends for at least 450°. The drawings of this reference clearly show that the external thread on the container finish does not extend for 450°. In FIG. 2, for example, (in addition to being discontinuous), the thread extends for slightly more than 360°, but the lower segment 116 does not extend entirely to the side of the finish as would be necessary for a length of 450° (360° + 90°). The Examiner in the Office Action does not suggest that any of the references teach dual threads, with each thread extending for at least 180°, as recited in claim 61.

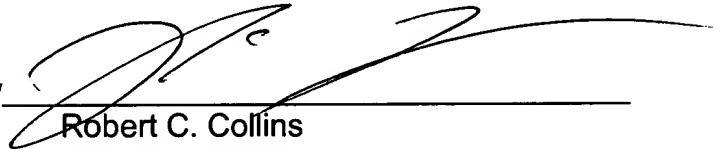
It is therefore believed and respectfully submitted that all claims 1-7, 9-28, 42-49 and 57-61 remaining in the application are allowable at this time, and favorable action is respectfully solicited.

Please charge any fees associated with this submission to Account No. 15-0875 (Owens-Illinois).

Respectfully submitted,

REISING, ETHINGTON, BARNES,
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By

A handwritten signature in black ink, appearing to read 'R. C. Collins', is written over a horizontal line.

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Enclosure